5.5 / 1 - 39 odd

Rules $a^m \cdot a^n = a^{m+n}$

So . . .

$$\log xy = \log x + \log y$$

since $\frac{a^m}{a^n} = a^{m-n}$

$$\log \frac{x}{y} = \log x - \log y$$

since $(a^m)^n = a^{mn}$

then

$$\log x^y = y \log x$$

$\log x$ is only defined when x is Positive.

(there is no exponent y that makes $10^y = 0$ or negative...)

$\log 1 = 0$

log version: $\log_a(a^b) = b$

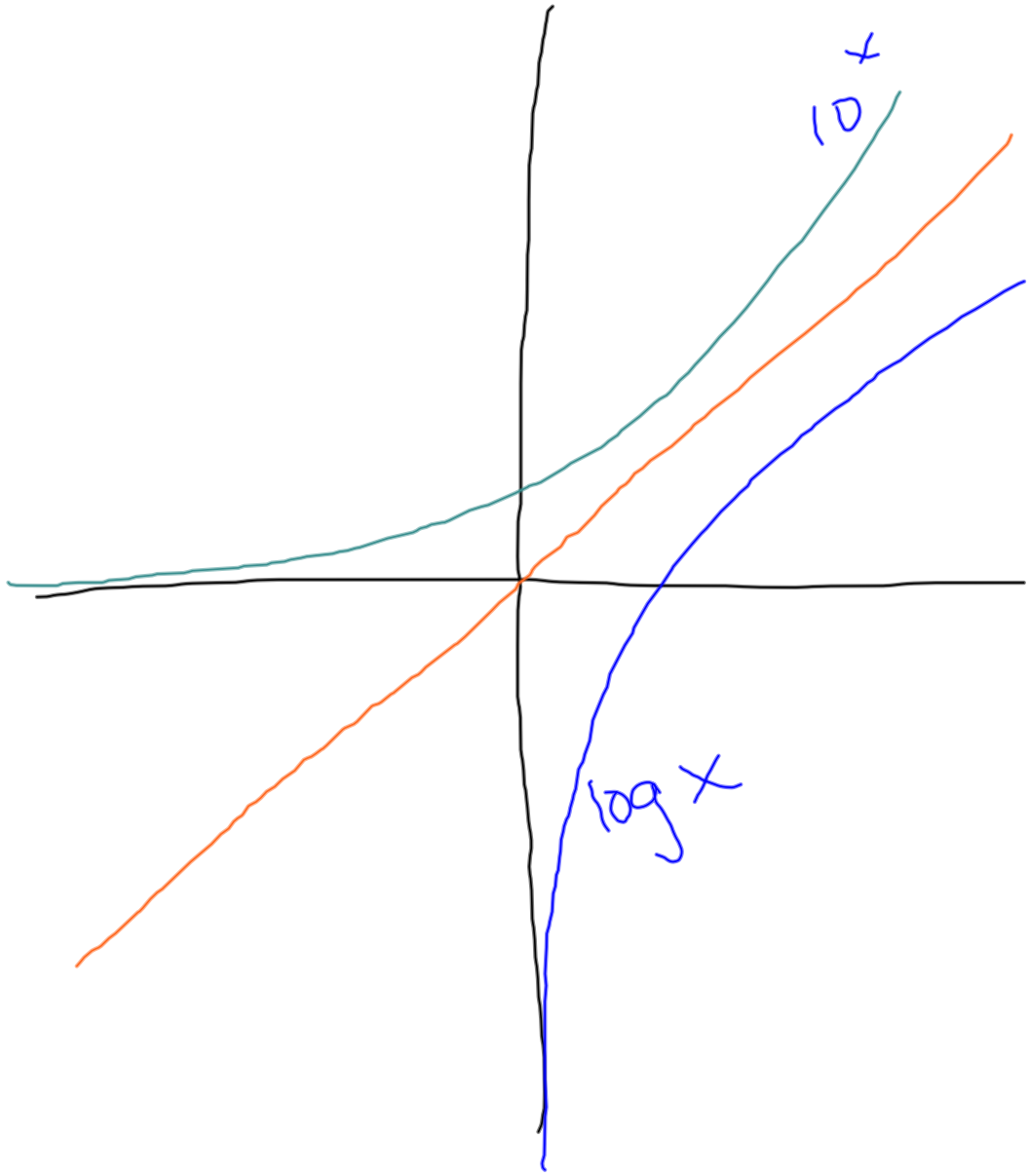
exponential version: $a^b = a^b$

$a^{(\log_a b)} = b$

let $\log_a b = x$

$a^x = b$

$\log_a b = c \iff a^c = b$


10^x
$\log x$

$$\ln(x+1) = 2$$

solve for x

graph 2^x .693

DRAW tangent @ $x=0$

record slope...

3^x 1.098

4^x 1.386...

$1

100%/yr

compounded?	$
1 x/yr.	$\left(1+\frac{1}{1}\right)^1 = 2$
2^{ce}/yr	$\left(1+\frac{1}{2}\right)^2 = 2.25$
4x/yr.	$\left(1+\frac{1}{4}\right)^4 = 2.6125$
365/yr	$\left(1+\frac{1}{365}\right)^{365} = 2.714567$
hrs	
mins	$\left(1+\frac{1}{525600}\right)^{525600} =$ 2.718279215
seconds	$\left(1+\frac{1}{10,000,000}\right)^{10\,000\,000}$ 2.718281693